

# STN Search History

L1 QUE (INSECTICID## OR PESTICID##) AND (HASV OR HELICOVERPA (A) ARMIGERA (A) STUNT (A) VIRUS)

L2 QUE TOXI### AND (HASV OR HELICOVERPA (A) ARMIGERA (A) STUNT (A) VIRUS)

L9 40 L6 AND (CAPSID OR P71) (P) (VECTOR OR CARR#### OR TOXI### OR INSECTICID#### OR PESTICID####)

L10 37 L6 AND (CAPSID OR P71) (S) (VECTOR OR CARR#### OR TOXI### OR INSECTICID#### OR PESTICID####)

L11 815 (CAPSID OR P71) AND (INSECTICID##### OR PESTICID##### OR TOX### #)

(FILE 'HOME' ENTERED AT 14:07:25 ON 14 APR 2003)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCCommerce, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 14:07:49 ON 14 APR 2003

SEA (INSECTICID## OR PESTICID##) AND (HASV OR HELICOVERPA (A) A

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1 FILE BIOTECHABS  
1 FILE BIOTECHDS  
4 FILE CAPLUS  
1 FILE CROPU  
2 FILE IFIPAT  
2 FILE TOXCENTER  
3 FILE USPATFULL

L1 QUE (INSECTICID## OR PESTICID##) AND (HASV OR HELICOVERPA (A) A

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SEA TOXI### AND (HASV OR HELICOVERPA (A) ARMIGERA (A) STUNT (A)

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1 FILE BIOSIS  
3 FILE CAPLUS  
1 FILE DGENE  
3 FILE IFIPAT  
1 FILE MEDLINE  
3 FILE TOXCENTER  
46 FILE USPATFULL  
1 FILE WPIDS  
1 FILE WPINDEX

L2 QUE TOXI### AND (HASV OR HELICOVERPA (A) ARMIGERA (A) STUNT (A)

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SEA INSECT##### (S) (RNA (5N) VIRUS)

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1 FILE ADISINSIGHT  
62 FILE AGRICOLA  
4 FILE AQUASCI  
7 FILE BIOBUSINESS  
1 FILE BIOCCommerce  
190 FILE BIOSIS  
67 FILE BIOTECHABS  
67 FILE BIOTECHDS  
116 FILE BIOTECHNO  
115 FILE CABA  
13 FILE CANCERLIT

107 FILE CAPLUS  
 7 FILE CEABA-VTB  
 3 FILE CONFSCI  
 1 FILE CROPB  
 5 FILE CROPU  
 1 FILE DDFU  
 170 FILE DGENE  
 2 FILE DRUGU  
 4 FILE EMBAL  
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 79 FILE ESBIODBASE  
 33\* FILE FEDRIP  
 1 FILE FROSTI  
 3 FILE FSTA  
 1 FILE GENBANK  
 1 FILE HEALSAFE  
 9 FILE IFIPAT  
 7 FILE JICST-EPLUS  
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 67 FILE MEDLINE  
 2 FILE NTIS  
 25 FILE PASCAL  
 1 FILE PHIN  
 4 FILE PROMT  
 135 FILE SCISEARCH  
 21 FILE TOXCENTER  
 262 FILE USPATFULL  
 3 FILE VETU  
 27 FILE WPIDS  
 27 FILE WPINDEX

L3 QUE INSECT##### (S) (RNA (5N) VIRUS)

FILE 'MEDLINE, CAPLUS, BIOSIS, BIOTECHNO, LIFESCI, EMBASE' ENTERED AT  
 14:14:40 ON 14 APR 2003

L4 758 S (L1 OR L2 OR L3)  
 L5 31995 S (HASV OR VIRUS) (S) (CAPSID OR P71)  
 L6 154 S L5 AND L4  
 L7 51 DUP REM L6 (103 DUPLICATES REMOVED)  
 L8 4 S L7 AND (L1 OR L2)  
 L9 40 S L6 AND (CAPSID OR P71) (P) (VECTOR OR CARR#### OR TOXI### OR  
 L10 37 S L6 AND (CAPSID OR P71) (S) (VECTOR OR CARR#### OR TOXI### OR  
 L11 815 S (CAPSID OR P71) AND (INSECTICID##### OR PESTICID##### OR TOX  
 L12 85 S L11 AND INSECT#####  
 L13 60 DUP REM L12 (25 DUPLICATES REMOVED)  
 L14 55 S L13 NOT L9  
 L15 2 S L14 AND (HASV OR (RNA OR HELICOVERPA) (S) VIRUS)  
 L16 37 S L14 AND (INSECTICID### OR PESTICID###)  
 L17 24 S L16 NOT PY>1995

L8 ANSWER 1 OF 4 MEDLINE  
 AN 2001496037 MEDLINE  
 DN 21429742 PubMed ID: 11543656  
 TI Replication-independent assembly of an insect virus (Tetraviridae) in plant cells.  
 AU Gordon K H; Williams M R; Baker J S; Gibson J M; Bawden A L; Millgate A G; Larkin P J; Hanzlik T N  
 CS CSIRO Entomology, Canberra, Australia.. karlg@ento.csiro.au  
 SO VIROLOGY, (2001 Sep 15) 288 (1) 36-50.  
 Journal code: 0110674. ISSN: 0042-6822.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 EM 200110  
 ED Entered STN: 20010910  
 Last Updated on STN: 20011015  
 Entered Medline: 20011011

AB Infectious virions of the **insect RNA virus Helicoverpa armigera stunt virus (HaSV; Omegatetravirus, Tetraviridae)** were assembled in cultured plant protoplasts of *Nicotiana plumbaginifolia* in the absence of detectable replication. Assembly of the **virus**, which has not been grown in cell culture, required cotransfection of a DNA plasmid expressing the **HaSV capsid** gene in combination with either genomic RNA or with DNA plasmids carrying the complete cDNAs to the two **HaSV** genomic RNAs. Each cDNA was placed under the control of the cauliflower mosaic virus 35S promoter and followed by a cis-acting ribozyme so that the resultant transcripts corresponded precisely to the two genomic RNAs. Protoplast assembly of infectious particles was confirmed by EM and bioassay of host insect larvae, which became diseased and produced virus particles confirmed as **HaSV**. Variant transcripts carrying nonviral sequences at either or both termini of the RNAs showed no infectivity, except for RNA2 carrying only a 3' terminal extension. No replication of **HaSV** in protoplasts was detected in pulse-labeling and blotting experiments. Insects showed less severe disease symptoms when fed protoplasts transfected with only the RNA1 and coat protein plasmids. The symptomatic larvae contained only RNA1 and failed to yield infectious progeny virus, suggesting that RNA1 is capable of self-replication. This novel plasmid-based system confirms that the reported sequence of **HaSV** represents an infective genome and establishes a procedure for the reverse genetics of a tetravirus.  
 Copyright 2001 Academic Press.

L8 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:58561 CAPLUS  
 DN 134:126824  
 TI Heliothis armigera stunt virus and its uses in protecting plants by genetic engineering  
 IN Christian, Peter Daniel; Gordon, Karl Hienrich Julius; Hanzlik, Terry Nelson  
 PA Commonwealth Scientific and Industrial Research Organization and Pacific Seeds Pty., Ltd., Australia  
 SO U.S., 130 pp., Cont.-in-part of U.S. Ser. No. 440,552, abandoned.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 6177075	B1	20010123	US 1995-485355	19950607
	US 2003041349	A1	20030227	US 2001-991262	20011120
PRAI	AU 1992-4081	A	19920814		
	US 1993-89372	B2	19930708		
	US 1995-440552	B2	19950512		
	US 1995-440522	B1	19950512		
	US 1999-234238	B1	19990120		

AB The present invention relates to an isolated small **RNA virus** capable of infecting **insect** species including *Heliothis* species, and to the nucleotide sequences and proteins encoded thereby. The invention contemplates uses of the virus in controlling insect attack in plants. **Helicoverpa armigera stunt virus (HaSV)** was characterized and used as an isolated small **RNA virus** capable of controlling **insect** attack (including *Heliothis* species) in plants via various genetically engineered prepsns., variants, or derivs. **HaSV** contained 2 RNA species, whose nucleotide sequences consisted of 5312 and 2478 nucleotides; RNA 2 also existed as a variant with an addnl. C residue at position 570. RNA 1 coded for the 1750-amino-acid RNA replicase (mol. wt. 187 kDa) as well as 3 smaller proteins (P11a, P11b, P14) coded on its 3'-terminal region. RNA 2 coded for P17 and the capsid protein precursor (P71) which is proteolytically cleaved to form 7200-mol.-wt. and 64,000-mol.-wt. mature capsid proteins. Viral infection activates or facilitates pathogenesis of an unrelated virus and these 2 agents act synergistically in causing larval gut cell disruption; the virus, its expressed RNAs, and its proteins were bioassayed on larva. PCR primers designed for specific regions of the **HaSV** genome were used to construct full-length RNA 1 and 2 clones for cloning and expression as well as clones expressing P64 and P7 capsid proteins, P70 (the RNA 2 variant capsid precursor), P71, and P17. In addn. to cloning in bacterial (*Escherichia coli*) systems, expression of **HaSV** products was achieved with baculovirus vectors in insect cells (*Spodoptera frugiperda* Sf9) as hosts. Northern blotting also confirmed that RNA electroporation into various plant protoplasts leads to RNA replication and expression of capsid proteins. Various ribozyme oligonucleotides were synthesized in order to get efficient replication, translation, or encapsidation of the RNA by excising structures downstream of the tRNA-like structures. Engineered forms of the virus are described in which a foreign, reporter, or insect **toxin** gene is inserted in place of the 5'-terminal portion of the RNA replicase gene such that encapsidation signals and the initiation codon are used to commence gene translation. Addnl., the capsid protein can be fused to an **insecticidal** protein **toxin** (ricin A or diphtheria **toxin**) to form a capsovector which protects the **toxin** from inactivation by insect gut.

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1998:1560 CAPLUS

DN 128:86401

TI Altering the cell tropism of small RNA **viruses** and **virus**-like particles by introduction of immunoglobulin-like domains into the **p71** coat protein

IN Gordon, Karl Heinrich; Hanzlik, Terry Nelson

PA Commonwealth Scientific and Industrial Research Organisation, Australia;  
Gordon, Karl Heinrich; Hanzlik, Terry Nelson

SO PCT Int. Appl., 40 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9746666	A1	19971211	WO 1997-AU349	19970602
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9729446	A1	19980105	AU 1997-29446	19970602
	AU 723006	B2	20000817		
	EP 1015560	A1	20000705	EP 1997-923669	19970602
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2000511426	T2	20000905	JP 1998-500014	19970602
	US 6251654	B1	20010626	US 1999-194613	19990702
PRAI	AU 1996-234	A	19960531		
	WO 1997-AU349	W	19970602		

AB The **p71** coat proteins of small **RNA viruses** of **insects** (Tetraviridae) have a core segment with the structure of a member of the Ig superfamily that is responsible for binding to the **insect** midgut. The cell tropism of these viruses can therefore be altered by introducing altered Ig-like domains or other substituted tertiary structures into this core domain. Proteins of up to 30 kilodaltons can be substituted for this domain. Virus, or virus-like particles derived from, it with modified cell tropism can be used as delivery vehicles in **insecticidal** and medical applications. In addn., the coat protein can be modified to minimize antigenicity for therapeutic use. The Ig-like structure could be exchanged for a minimal loop (the peptide SGSGS) without affecting particle formation and RNA packaging.

L8 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1994:550549 CAPLUS

DN 121:150549

TI Insect viruses and their uses in protecting plants

IN Christian, Peter Daniel; Gordon, Karl Heinrich Julius; Hanzlik, Terry Nelson

PA Commonwealth Scientific and Industrial Research Organization, Australia; Pacific Seeds Pty. Ltd.

SO PCT Int. Appl., 182 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9404660	A1	19940303	WO 1993-AU411	19930813
	W: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW				
	AU 678982	B2	19970619	AU 1993-46912	19930813
	AU 9346912	A1	19940315		
	EP 786003	A1	19970730	EP 1993-917448	19930813
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	BR 9306907	A	19981208	BR 1993-6907	19930813
	US 2003041349	A1	20030227	US 2001-991262	20011120
PRAI	AU 1992-4081	A	19920814		
	US 1993-89372	A	19930708		

WO 1993-AU411	W	19930813
US 1995-440522	B1	19950512
US 1999-234238	B1	19990120

AB **Helicoverpa armigera stunt virus** (**HaSV**) was characterized and used as an isolated small **RNA virus** capable of controlling **insect** attack (including *Heliothis* species) in plants via various genetically engineered prepns., variants, or derivs. **HaSV** contained 2 RNA species, whose nucleotide sequences consisted of 5312 and 2478 nucleotides; RNA 2 also existed as a variant with an addnl. C residue at position 570. RNA 1 coded for the 1750-amino-acid RNA replicase (mol. wt. 187 kDa) as well as 3 smaller proteins (P11a, P11b, P14) coded on its 3'-terminal region. RNA 2 coded for P17 and the capsid protein precursor (P71) which is proteolytically cleaved to form 7200-mol.-wt. and 64,000-mol.-wt. mature capsid proteins. Viral infection activates or facilitates pathogenesis of an unrelated virus and these 2 agents act synergistically in causing larval gut cell disruption; the virus, its expressed RNAs, and its proteins were bioassayed on larva. PCR primers designed for specific regions of the **HaSV** genome were used to construct full-length RNA 1 and 2 clones for cloning and expression as well as clones expressing P64 and P7 capsid proteins, P70 (the RNA 2 variant capsid precursor), **P71**, and P17. In addn. to cloning in bacterial (*Escherichia coli*) systems, expression of **HaSV** products was achieved with baculovirus vectors in insect cells (*Spodoptera frugiperda* Sf9) as hosts. Northern blotting also confirmed that RNA electroporation into various plant protoplasts leads to RNA replication and expression of capsid proteins. Various ribozyme oligonucleotides were synthesized in order to get efficient replication, translation, or encapsidation of the RNA by excising structures downstream of the tRNA-like structures. Engineered forms of the virus are described in which a foreign, reporter, or insect **toxin** gene is inserted in place of the 5'-terminal portion of the RNA replicase gene such that encapsidation signals and the initiation codon are used to commence gene translation.

L9 ANSWER 1 OF 40 MEDLINE  
 TI Replication-independent assembly of an insect virus (Tetraviridae) in plant cells.  
 AU Gordon K H; Williams M R; Baker J S; Gibson J M; Bawden A L; Millgate A G; Larkin P J; Hanzlik T N  
 SO VIROLOGY, (2001 Sep 15) 288 (1) 36-50.  
 Journal code: 0110674. ISSN: 0042-6822.

L9 ANSWER 2 OF 40 MEDLINE  
 TI Expression of tobacco ringspot **virus capsid** protein and satellite **RNA** in **insect** cells and three-dimensional structure of tobacco ringspot **virus**-like particles.  
 AU Singh S; Rothnagel R; Prasad B V; Buckley B  
 SO VIROLOGY, (1995 Nov 10) 213 (2) 472-81.  
 Journal code: 0110674. ISSN: 0042-6822.

L9 ANSWER 3 OF 40 CAPLUS COPYRIGHT 2003 ACS  
 TI Replication-Independent Assembly of an Insect Virus (Tetraviridae) in Plant Cells  
 AU Gordon, Karl H. J.; Williams, Michelle R.; Baker, Jamie S.; Gibson, Jenny M.; Bawden, Alison L.; Millgate, Anthony G.; Larkin, Philip J.; Hanzlik, Terry N.  
 SO Virology (2001), 288(1), 36-50  
 CODEN: VIRLAX; ISSN: 0042-6822

L9 ANSWER 4 OF 40 CAPLUS COPYRIGHT 2003 ACS  
 TI Heliothis armigera stunt virus and its uses in protecting plants by genetic engineering  
 IN Christian, Peter Daniel; Gordon, Karl Hienrich Julius; Hanzlik, Terry Nelson  
 SO U.S., 130 pp., Cont.-in-part of U.S. Ser. No. 440,552, abandoned.  
 CODEN: USXXAM

L9 ANSWER 5 OF 40 CAPLUS COPYRIGHT 2003 ACS  
 TI Recombinant Nudaurelia .beta. or .beta.-like virus (N.beta.V) and vectors and their use in the preparation of insecticidal transgenic plants  
 IN Gordon, Karl H.; Hanzlik, Terry N.; Hendry, Donald A.  
 SO Pat. Specif. (Aust.), 30 pp.  
 CODEN: ALXXAP

L9 ANSWER 6 OF 40 CAPLUS COPYRIGHT 2003 ACS  
 TI Specific encapsidation of nodavirus RNAs is mediated through the C terminus of capsid precursor protein alpha  
 AU Schneemann, Anette; Marshall, Dawn  
 SO Journal of Virology (1998), 72(11), 8738-8746  
 CODEN: JOVIAM; ISSN: 0022-538X

L9 ANSWER 7 OF 40 CAPLUS COPYRIGHT 2003 ACS  
 TI Altering the cell tropism of small RNA **viruses** and **virus**-like particles by introduction of immunoglobulin-like domains into the **p71** coat protein  
 IN Gordon, Karl Heinrich; Hanzlik, Terry Nelson  
 SO PCT Int. Appl., 40 pp.  
 CODEN: PIXXD2

L9 ANSWER 8 OF 40 CAPLUS COPYRIGHT 2003 ACS  
 TI Expression of tobacco ringspot **virus capsid** protein and satellite **RNA** in **insect** cells and three-dimensional structure of tobacco ringspot **virus**-like particles

- AU Singh, Sarabjot; Rothnagel, Rosalba; Prasad, B. V. Venkataram; Buckley, Becky  
 SO Virology (1995), 213(2), 472-81  
 CODEN: VIRLAX; ISSN: 0042-6822
- L9 ANSWER 9 OF 40 CAPLUS COPYRIGHT 2003 ACS  
 TI Insect viruses and their uses in protecting plants  
 IN Christian, Peter Daniel; Gordon, Karl Heinrich Julius; Hanzlik, Terry Nelson  
 SO PCT Int. Appl., 182 pp.  
 CODEN: PIXXD2
- L9 ANSWER 10 OF 40 CAPLUS COPYRIGHT 2003 ACS  
 TI Expression of simian type D retroviral (Mason-Pfizer monkey **virus**) **capsids** in insect cells using recombinant baculovirus  
 AU Sommerfelt, Maja A.; Roberts, Charles R.; Hunter, Eric  
 SO Virology (1993), 192(1), 298-306  
 CODEN: VIRLAX; ISSN: 0042-6822
- L9 ANSWER 11 OF 40 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI Analysis of RNA packaging in wild-type and mosaic protein **capsids** of flock house **virus** using recombinant baculovirus **vectors**.  
 AU Krishna, Neel K.; Marshall, Dawn; Schneemann, Anette (1)  
 SO Virology, (January 5 2003) Vol. 305, No. 1, pp. 10-24. print.  
 ISSN: 0042-6822.
- L9 ANSWER 12 OF 40 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI The palm subdomain-based active site is internally permuted in viral RNA-dependent RNA polymerases of an ancient lineage.  
 AU Gorbalenya, Alexander E. (1); Pringle, Fiona M.; Zeddam, Jean-Louis; Luke, Brian T.; Cameron, Craig E.; Kalmakoff, James; Hanzlik, Terry N.; Gordon, Karl H. J.; Ward, Vernon K.  
 SO Journal of Molecular Biology, (15 November 2002) Vol. 324, No. 1, pp. 47-62. print.  
 ISSN: 0022-2836.
- L9 ANSWER 13 OF 40 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI Nucleotide sequence analysis shows that Kashmir Bee Virus is a member of a novel group of insect-infecting viruses.  
 AU Topley, E. (1); Leat, N. (1); Allsopp, M.; Davison, S. (1)  
 SO Abstracts of the General Meeting of the American Society for Microbiology, (2001) Vol. 101, pp. 694. <http://www.asmtusa.org/mtgsrc/generalmeeting.htm>. print.  
 Meeting Info.: 101st General Meeting of the American Society for Microbiology Orlando, FL, USA May 20-24, 2001  
 ISSN: 1060-2011.
- L9 ANSWER 14 OF 40 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI Replication-independent assembly of an insect virus (Tetraviridae) in plant cells.  
 AU Gordon, Karl H. J. (1); Williams, Michelle R.; Baker, Jamie S.; Gibson, Jenny M.; Bawden, Alison L.; Millgate, Anthony G.; Larkin, Philip J.; Hanzlik, Terry N. (1)  
 SO Virology, (September 15, 2001) Vol. 288, No. 1, pp. 36-50. print.  
 ISSN: 0042-6822.
- L9 ANSWER 15 OF 40 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI Large conformational changes in the maturation of a simple RNA virus, Nudaurelia capensis omega virus (NomegaV).  
 AU Canady, Mary A.; Tihova, Mariana; Hanzlik, Terry N.; Johnson, John E. (1);



Yeager, Mark (1)  
SO Journal of Molecular Biology, (9 June, 2000) Vol. 299, No. 3, pp. 573-584.  
print.  
ISSN: 0022-2836.

L9 ANSWER 16 OF 40 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
TI Specific encapsidation of nodavirus RNAs is mediated through the C  
terminus of capsid precursor protein alpha.  
AU Schneeman, Anette (1); Marshall, Dawn  
SO Journal of Virology, (Nov., 1998) Vol. 72, No. 11, pp. 8738-8746.  
ISSN: 0022-538X.

L9 ANSWER 17 OF 40 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
TI Expression of tobacco ringspot **virus capsid** protein  
and satellite **RNA** in **insect** cells and  
three-dimensional structure of tobacco ringspot **virus**-like  
particles.  
AU Singh, Sarabjot; Rothnagel, Rosalba; Prasad, B. V. Venkataram; Buckley,  
Becky (1)  
SO Virology, (1995) Vol. 213, No. 2, pp. 472-481.  
ISSN: 0042-6822.

L9 ANSWER 18 OF 40 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
TI BIOLOGICAL CONTROL OF THE OIL PALM PEST LATOIA-VIRIDISSIMA LEPIDOPTERA  
LIMACODIDAE IN IVORY COAST BY A NEW PICORNAVIRUS.  
AU FEDIERE G; PHILIPPE R; VEYRUNES J C; MONSARRAT P  
SO ENTOMOPHAGA, (1990) 35 (3), 347-354.  
CODEN: ETPGAY. ISSN: 0013-8959.

L9 ANSWER 19 OF 40 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
TI EXPRESSION OF SINDBIS VIRUS 26S COMPLEMENTARY DNA IN SPODOPTERA-FRUGIPERDA  
SF9 CELLS USING A BACULOVIRUS EXPRESSION VECTOR.  
AU OKER-BLOM C; SUMMERS M D  
SO J VIROL, (1989) 63 (3), 1256-1264.  
CODEN: JOVIAM. ISSN: 0022-538X.

L9 ANSWER 20 OF 40 BIOTECHNO COPYRIGHT 2003 Elsevier Science B.V.  
TI Analysis of RNA packaging in wild-type and mosaic protein **capsids**  
of flock house **virus** using recombinant baculovirus  
**vectors**  
AU Krishna N.K.; Marshall D.; Schneemann A.  
SO Virology, (2003), 305/1 (10-24), 32 reference(s)  
CODEN: VIRLAX ISSN: 0042-6822

L9 ANSWER 21 OF 40 BIOTECHNO COPYRIGHT 2003 Elsevier Science B.V.  
TI The palm subdomain-based active site is internally permuted in viral  
RNA-dependent RNA polymerases of an ancient lineage  
AU Gorbalenya A.E.; Pringle F.M.; Zeddam J.-L.; Luke B.T.; Cameron C.E.;  
Kalmakoff J.; Hanzlik T.N.; Gordon K.H.J.; Ward V.K.  
SO Journal of Molecular Biology, (2002), 324/1 (47-62), 78 reference(s)  
CODEN: JMOBAK ISSN: 0022-2836

L9 ANSWER 22 OF 40 BIOTECHNO COPYRIGHT 2003 Elsevier Science B.V.  
TI Replication-independent assembly of an insect virus (Tetraviridae) in  
plant cells  
AU Gordon K.H.J.; Williams M.R.; Baker J.S.; Gibson J.M.; Bawden A.L.;  
Millgate A.G.; Larkin P.J.; Hanzlik T.N.  
SO Virology, (15 SEP 2001), 288/1 (36-50), 58 reference(s)  
CODEN: VIRLAX ISSN: 0042-6822

L9 ANSWER 23 OF 40 BIOTECHNO COPYRIGHT 2003 Elsevier Science B.V.

TI Co-expression of the **capsid** proteins of Cowpea mosaic **virus** in insect cells leads to the formation of **virus**-like particles  
 AU Shanks M.; Lomonossoff G.P.  
 SO Journal of General Virology, (2000), 81/12 (3093-3097), 15 reference(s)  
 CODEN: JGVIAY ISSN: 0022-1317

L9 ANSWER 24 OF 40 BIOTECHNO COPYRIGHT 2003 Elsevier Science B.V.  
 TI Large conformational changes in the maturation of a simple RNA virus, Nudaurelia capensis .omega. virus (N.omega.V)  
 AU Canady M.A.; Tihova M.; Hanzlik T.N.; Johnson J.E.; Yeager M.  
 SO Journal of Molecular Biology, (09 JUN 2000), 299/3 (573-584), 49 reference(s)  
 CODEN: JMOBAK ISSN: 0022-2836

L9 ANSWER 25 OF 40 BIOTECHNO COPYRIGHT 2003 Elsevier Science B.V.  
 TI Specific encapsidation of nodavirus RNAs is mediated through the C terminus of **capsid** precursor protein alpha  
 AU Schneemann A.; Marshall D.  
 SO Journal of Virology, (1998), 72/11 (8738-8746), 24 reference(s)  
 CODEN: JOVIAM ISSN: 0022-538X

L9 ANSWER 26 OF 40 BIOTECHNO COPYRIGHT 2003 Elsevier Science B.V.  
 TI Expression of tobacco ringspot **virus capsid** protein and satellite **RNA** in **insect** cells and three-dimensional structure of tobacco ringspot **virus**-like particles  
 AU Singh S.; Rothnagel R.; Prasad B.V.V.; Buckley B.  
 SO Virology, (1995), 213/2 (472-481)  
 CODEN: VIRLAX ISSN: 0042-6822

L9 ANSWER 27 OF 40 BIOTECHNO COPYRIGHT 2003 Elsevier Science B.V.  
 TI Insect-mediated transmission of mixed and reassorted cucumovirus genomic RNAs  
 AU Perry K.L.; Francki R.I.B.  
 SO Journal of General Virology, (1992), 73/8 (2105-2114)  
 CODEN: JGVIAY ISSN: 0022-1317

L9 ANSWER 28 OF 40 LIFESCI COPYRIGHT 2003 CSA  
 TI Analysis of RNA Packaging in Wild-Type and Mosaic Protein **Capsids** of Flock House **Virus** Using Recombinant Baculovirus **Vectors**  
 AU Krishna, N.K.; Marshall, D.; Schneemann, A.  
 SO Virology, (20030105) vol. 305, no. 1, pp. 10-24.  
 ISSN: 0042-6822.

L9 ANSWER 29 OF 40 LIFESCI COPYRIGHT 2003 CSA  
 TI The Palm Subdomain-based Active Site is Internally Permuted in Viral RNA-dependent RNA Polymerases of an Ancient Lineage  
 AU Gorbalenya, A.; Pringle, F.; Zeddam, J.; Luke, B.; Cameron, C.; Kalmakoff, J.; Hanzlik, T.; Gordon, K.; Ward, V.  
 SO Journal of Molecular Biology [J. Mol. Biol.], (20021115) vol. 324, no. 1, pp. 47-62.  
 ISSN: 0022-2836.

L9 ANSWER 30 OF 40 LIFESCI COPYRIGHT 2003 CSA  
 TI Replication-Independent Assembly of an Insect Virus (Tetraviridae) in Plant Cells  
 AU Gordon, K.H.; Williams, M.R.; Baker, J.S.; Gibson, J.M.; Bawden, A.L.; Millgate, A.G.; Larkin, P.J.; Hanzlik, T.N.\*  
 SO Virology, (20010915) vol. 288, no. 1, pp. 36-50.

ISSN: 0042-6822.

L9 ANSWER 31 OF 40 LIFESCI COPYRIGHT 2003 CSA  
TI Large Conformational Changes in the Maturation of a Simple RNA Virus,  
Nudaurelia capensis omega Virus (N omega V)  
AU Canady, M.A.; Tihova, M.; Hanzlik, T.N.; Johnson, J.E.; Yeager, M.  
SO Journal of Molecular Biology [J. Mol. Biol.], (20000609) vol. 299, no. 3,  
pp. 573-584.  
ISSN: 0022-2836.

L9 ANSWER 32 OF 40 LIFESCI COPYRIGHT 2003 CSA  
TI Specific encapsidation of nodavirus RNAs is mediated through the C  
terminus of capsid precursor protein alpha  
AU Schneemann, A.\*; Marshall, D.  
SO J. Virol., (19981100) vol. 72, no. 11, pp. 8738-8746.  
ISSN: 0022-538X.

L9 ANSWER 33 OF 40 LIFESCI COPYRIGHT 2003 CSA  
TI Biological control of the oil palm pest *Latoia viridissima* (Lepidoptera,  
Limacodidae), in Cote d'Ivoire, by a new picornavirus.  
AU Fediere, G.; Philippe, R.; Veyrunes, J.C.; Monsarrat, P.  
SO ENTOMOPHAGA., (1990) vol. 35, no. 3, pp. 347-354.

L9 ANSWER 34 OF 40 LIFESCI COPYRIGHT 2003 CSA  
TI Expression of Sindbis virus 26S cDNA in *Spodoptera frugiperda* (Sf9)  
cells, using a baculovirus expression vector.  
AU Oker-Blom, C.; Summers, M.D.  
SO J. VIROL., (1989) vol. 63, no. 3, pp. 1256-1264.

L9 ANSWER 35 OF 40 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.  
TI Analysis of RNA packaging in wild-type and mosaic protein **capsids**  
of flock house **virus** using recombinant baculovirus  
**vectors**.  
AU Krishna N.K.; Marshall D.; Schneemann A.  
SO Virology, (2003) 305/1 (10-24).  
Refs: 32  
ISSN: 0042-6822 CODEN: VIRLAX

L9 ANSWER 36 OF 40 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.  
TI The palm subdomain-based active site is internally permuted in viral  
RNA-dependent RNA polymerases of an ancient lineage.  
AU Gorbalenya A.E.; Pringle F.M.; Zeddarn J.-L.; Luke B.T.; Cameron C.E.;  
Kalmakoff J.; Hanzlik T.N.; Gordon K.H.J.; Ward V.K.  
SO Journal of Molecular Biology, (2002) 324/1 (47-62).  
Refs: 78  
ISSN: 0022-2836 CODEN: JMOBAK

L9 ANSWER 37 OF 40 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.  
TI Replication-independent assembly of an insect virus (Tetraviridae) in  
plant cells.  
AU Gordon K.H.J.; Williams M.R.; Baker J.S.; Gibson J.M.; Bawden A.L.;  
Millgate A.G.; Larkin P.J.; Hanzlik T.N.  
SO Virology, (15 Sep 2001) 288/1 (36-50).  
Refs: 58  
ISSN: 0042-6822 CODEN: VIRLAX

L9 ANSWER 38 OF 40 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.  
TI Large conformational changes in the maturation of a simple RNA virus,  
*Nudaurelia capensis* .omega. virus (N.omega.V).  
AU Canady M.A.; Tihova M.; Hanzlik T.N.; Johnson J.E.; Yeager M.  
SO Journal of Molecular Biology, (9 Jun 2000) 299/3 (573-584).

Refs: 49

ISSN: 0022-2836 CODEN: JMOBAK

L9 ANSWER 39 OF 40 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.  
TI Specific encapsidation of nodavirus RNAs is mediated through the C  
terminus of capsid precursor protein alpha.  
AU Schneemann A.; Marshall D.  
SO Journal of Virology, (1998) 72/11 (8738-8746).  
Refs: 24  
ISSN: 0022-538X CODEN: JOVIAM

L9 ANSWER 40 OF 40 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.  
TI Expression of tobacco ringspot **virus capsid** protein  
and satellite **RNA** in **insect** cells and  
three-dimensional structure of tobacco ringspot **virus**-like  
particles.  
AU Singh S.; Rothnagel R.; Prasad B.V.V.; Buckley B.  
SO Virology, (1995) 213/2 (472-481).  
ISSN: 0042-6822 CODEN: VIRLAX

L9 ANSWER 5 OF 40 CAPLUS COPYRIGHT 2003 ACS  
 AN 2000:531889 CAPLUS  
 DN 133:115934  
 TI Recombinant Nudaurelia .beta. or .beta.-like virus (N.beta.V) and vectors  
 and their use in the preparation of insecticidal transgenic plants  
 IN Gordon, Karl H.; Hanzlik, Terry N.; Hendry, Donald A.  
 PA Commonwealth Scientific and Industrial Research Organisation, Australia;  
 Rhodes University  
 SO Pat. Specif. (Aust.), 30 pp.  
 CODEN: ALXXAP  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	AU 711559	B2	19991014	AU 1997-24669	19970602
	AU 9724669	A1	19971204		
	ZA 9704839	A	19980219	ZA 1997-4839	19970602
PRAI	AU 1996-233	A	19960531		

AB The invention relates to isolated nucleic acid mols. comprising a nucleotide sequence which hybridizes to the genomic RNA sequence, or protein-encoding or non-protein-encoding portions thereof, of Nudaurelia .beta. virus (N.beta.V) or other serol. related Nudaurelia .beta.-like virus. Recombinant virus vectors including the nucleic acid mols., methods of producing N.beta.V or other serol. related Nudaurelia .beta.-like virus, and virus-like particles (VLPs) are also described. These recombinant N.beta.Vs and their vectors expressing insecticidal protein toxins can be used to make transgenic plants resistant to insect infections.

L9 ANSWER 8 OF 40 CAPLUS COPYRIGHT 2003 ACS  
 AN 1995:945201 CAPLUS  
 DN 124:22764  
 TI Expression of tobacco ringspot **virus capsid** protein  
 and satellite **RNA** in **insect** cells and  
 three-dimensional structure of tobacco ringspot **virus**-like  
 particles  
 AU Singh, Sarabjot; Rothnagel, Rosalba; Prasad, B. V. Venkataram; Buckley,  
 Becky  
 CS Div. of Molecular Virology and Verna and Marrs McLean Dep. of Biochem.,  
 Baylor College of Medicine, Houston, TX, 77030, USA  
 SO Virology (1995), 213(2), 472-81  
 CODEN: VIRLAX; ISSN: 0042-6822  
 PB Academic  
 DT Journal  
 LA English  
 AB The **capsid** protein gene of tobacco ringspot **virus**  
 (TobRV), which had been modified to contain an amino-terminal methionine  
 codon, was ligated into a baculovirus transfer **vector** downstream  
 from the polyhedrin promoter. The resulting plasmid was cotransfected  
 with linearized baculovirus DNA into insect cells. Recombinant  
 baculovirus expressed high levels of the TobRV **capsid** protein  
 that assembled to form **virus**-like particles that were similar in  
 size and shape to authentic TobRV **capsids**. These **virus**  
 -like particles did not encapsidate any RNA, including the **capsid**  
 protein mRNA. The **capsid** protein mRNA is a truncated RNA 2,  
 which may lack a putative encapsidation signal. To det. whether an intact  
 packaging substrate could be encapsidated by the TobRV **capsid**  
 protein, another recombinant baculovirus, concomitantly expressing both  
**capsid** protein and TobRV satellite RNA, was constructed.

Surprisingly, the vast majority of the satellite RNA mols. expressed from this recombinant baculovirus were ligated in the insect cells to form circular RNA mols. Like circular forms of satellite RNA generated in planta, these circular satellite mols. remained unencapsidated by the TobRV **capsid** protein. Computer-generated three-dimensional reconstruction using electron cryomicrographs of the empty **virus**-like particles allowed the first structural analyses of any nepovirus **capsid**. This 22-Å. resoln. reconstruction resembled **capsids** of other members of the picornavirus superfamily. These data supports the hypothesis that the nepovirus **capsid** is structurally analogous to those of the como- and picornaviruses.

L9 ANSWER 18 OF 40 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 AN 1991:68852 BIOSIS  
 DN BA91:37512  
 TI BIOLOGICAL CONTROL OF THE OIL PALM PEST LATOIA-VIRIDISSIMA LEPIDOPTERA LIMACODIDAE IN IVORY COAST BY A NEW PICORNAVIRUS.  
 AU FEDIERE G; PHILIPPE R; VEYRUNES J C; MONSARRAT P  
 CS LAB. D'ENTOMOVIROLOGIE, CENTRE ORSTOM D'ADIPODOUME, B.P. V-51, ABIDJAN, COTE D'IVOIRE.  
 SO ENTOMOPHAGA, (1990) 35 (3), 347-354.  
 CODEN: ETPGAY. ISSN: 0013-8959.  
 FS BA; OLD  
 LA English  
 AB Among the major oil palm pest **insects** in the Cote d'Ivoire, *Latoia viridissima* Holland [Lepidoptera, Limacodidae] is the most frequently observed defoliator. During a pullulation of this species, a natural epizootic permitted us to demonstrate the occurrence of a small isometric **RNA virus** of 30 nm in diameter. The buoyant density of the **virus** particles was 1.34. The **virus capsid** containing 2 major proteins with molecular weights of 30,000 (55%) and 31,000 (20%) and 3 minor proteins. One genome component was detected with molecular weight 2,9 .times. 10<sup>6</sup>. Agarose gel diffusion tests showed **virus** was distinct from any other described **insect** Picornavirus. Trials with different doses of viral suspensions were tested on industrial oil palm plantation, allocated by *L. viridissima*, from ground level, using an automatic air **carried** sprayer. One week after the treatment, a mortality gradient, increasing from 11 to 61% according to the dose applied, was obtained. Two weeks after the treatment the mortality reached 92% of the larvae in the treated parcels. During the next generation, the number of caterpillars on the same parcel was very low.

L9 ANSWER 33 OF 40 LIFESCI COPYRIGHT 2003 CSA  
 AN 90:61068 LIFESCI  
 TI Biological control of the oil palm pest *Latoia viridissima* (Lepidoptera, Limacodidae), in Cote d'Ivoire, by a new picornavirus.  
 AU Fediere, G.; Philippe, R.; Veyrunes, J.C.; Monsarrat, P.  
 CS Lab. Entomovirolog., Cent. ORSTOM Adiopodoume, B.P. V-51, Abidjan, Ivory Coast  
 SO ENTOMOPHAGA., (1990) vol. 35, no. 3, pp. 347-354.  
 DT Journal  
 FS Z; D; V; A; W  
 LA English  
 SL English; French  
 AB Among the major oil palm pest **insects** in the Cote d'Ivoire, *Latoia viridissima* Holland (Lepidoptera, Limacodidae) is the most frequently observed defoliator. During a pullulation of this species, a natural epizootic permitted us to demonstrate the occurrence of a small isometric **RNA virus** of 30 nm in diameter. The buoyant density of the **virus** particles was 1.34. The **virus**

**capsid** contained 2 major proteins with molecular weights of 30,000 (55%) and 31,000 (20%) and 3 minor proteins. One genome component was detected with molecular weight  $2,9 \times 10^6$ . Agarose gel diffusion tests showed this **virus** was distinct from any other described **insect** Picornavirus. Trials with different doses of viral suspensions were tested on industrial oil palm plantation, allocated by L. viridissima), from ground level, using an automatic air **carried** sprayer. One week after the treatment, a mortality gradient, increasing from 11 to 61% according to the dose applied, was obtained.

- L17 ANSWER 1 OF 24 MEDLINE  
 TI The pathway of infection of Autographa californica nuclear polyhedrosis virus in an **insect** host.  
 AU Keddie B A; Aponte G W; Volkman L E  
 SO SCIENCE, (1989 Mar 31) 243 (4899) 1728-30.  
 Journal code: 0404511. ISSN: 0036-8075.
- L17 ANSWER 2 OF 24 MEDLINE  
 TI Production of polyhedrin monoclonal antibodies for distinguishing two Orgyia pseudotsugata baculoviruses.  
 AU Quant R L; Pearson M N; Rohrmann G F; Beaudreau G S  
 SO APPLIED AND ENVIRONMENTAL MICROBIOLOGY, (1984 Oct) 48 (4) 732-6.  
 Journal code: 7605801. ISSN: 0099-2240.
- L17 ANSWER 3 OF 24 MEDLINE  
 TI Granulosis viruses, with emphasis on the GV of the Indian meal moth, Plodia interpunctella.  
 AU Consigli R A; Tweeten K A; Anderson D K; Bulla L A Jr  
 SO ADVANCES IN VIRUS RESEARCH, (1983) 28 141-73. Ref: 184  
 Journal code: 0370441. ISSN: 0065-3527.
- L17 ANSWER 4 OF 24 MEDLINE  
 TI Isolation and purification of a granulosis virus from infected larvae of the Indian meal moth, Plodia interpunctella.  
 AU Tweeten K A; Bulla L A Jr; Consigli R A  
 SO APPLIED AND ENVIRONMENTAL MICROBIOLOGY, (1977 Sep) 34 (3) 320-7.  
 Journal code: 7605801. ISSN: 0099-2240.
- L17 ANSWER 5 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 TI Recent trials with pyrethroids in potato, winter rape and field beans  
 AU Nilsson, Christer  
 SO Vaextskyddsrapporter, Jordbruk (1984), 28, 116-21  
 CODEN: VAJODH; ISSN: 0347-3236
- L17 ANSWER 6 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 TI Further trials on alternatives to DDT for the control of preblossom pests on apple and pear  
 AU Vernon, J. D. R.; Gould, H. J.  
 SO Plant Pathology (1972), 21(1), 1-9  
 CODEN: PLPAAD; ISSN: 0032-0862
- L17 ANSWER 7 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 TI Field-trials of anti-**capsid insecticides** on farmers' cocoa in Ghana, 1956-60. 2. Effects of different **insecticides** compared by counting **capsids**, and **capsid-counting** compared with counting the percentage of newly damaged trees  
 AU Johnson, C. G.; Burge, G. A.  
 SO Ghana Journal of Agricultural Science (1971), 4(Pt. 1), 33-8  
 CODEN: GJASAF; ISSN: 0533-8662
- L17 ANSWER 8 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 TI Comparison of four **insecticides** for the control of the common green **capsid**, Lygocoris pabulinus (Heteroptera-Miridae), on apple trees  
 AU Wightman, J. A.  
 SO Plant Pathology (1971), 20(2), 66-8  
 CODEN: PLPAAD; ISSN: 0032-0862
- L17 ANSWER 9 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 TI Field trials of anti-**capsid insecticides** on farmers' cocoa in Ghana, 1956-60. 1. Comparing the effects of treatments by



- assessing subsequent damage
- AU Johnson, C. G.; Burge, G. A.; Gibbs, D. G.  
 SO Ghana Journal of Agricultural Science (1970), 3(Pt. 2), 155-77  
 CODEN: GJASAF; ISSN: 0533-8662
- L17 ANSWER 10 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 TI Testing of fungicides and **insecticides** in 1969  
 AU Noeddegaard, E.; Hansen, Torkil; Noehr Rasmussen, A.  
 SO Tidsskrift for Planteavl (1970), 74(5), 618-61  
 CODEN: TPLAAV; ISSN: 0040-7135
- L17 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 TI **Pesticidal** pyrimidinyl phosphorothioate, and its application  
 IN Sharpe, Stuart P.; Snell, Brian K.  
 SO Brit., 7 pp. Division of Brit. 1203026  
 CODEN: BRXXAA
- L17 ANSWER 12 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 TI **Insecticide** work at C.R.I.G. [Cocoa Research Institute of  
 Ghana], Tafo  
 AU Marchart, H.  
 SO Cafe, Cacao, The (1969), 13(3), 213-15  
 CODEN: CACAAY; ISSN: 0007-9510
- L17 ANSWER 13 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 TI Synthetic **insecticides**  
 AU Emery, G. A.  
 SO Intern. Congr. Plant Protect. (Heverlee, Belg.) (1946), 1(Gen. Rept.),  
 351-8
- L17 ANSWER 14 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 TI Mineral oils as **insecticides**  
 AU Carroll, J.  
 SO Econ. Proc. Roy. Dublin Soc. (1938), 3, 63-74
- L17 ANSWER 15 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 TI Carbolineum as an **insecticide**  
 AU Speyer, W.  
 SO Z. angew. Entomol. (1934), 20, 564-89
- L17 ANSWER 16 OF 24 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI Transmission of three strains of potato virus Y by Myzus nicotianae.  
 AU Cupertino, F. P.; Costa, C. L.; Silva, Ana Maria R.  
 SO Fitopatologia Brasileira, (1993) Vol. 18, No. 1, pp. 102-106.  
 ISSN: 0100-4158.
- L17 ANSWER 17 OF 24 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI EFFECT OF LATE NITROGEN LEAF DRESSING ON SOFT AND DURUM WHEAT YIELD AND  
 GRAIN QUALITY.  
 AU DEKOV D  
 SO RASTENIEV'D NAUKI, (1988) 25 (7), 17-23.  
 CODEN: RSTNA7. ISSN: 0568-465X.
- L17 ANSWER 18 OF 24 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI EFFECTS OF **PESTICIDES** IN DIFFERENT CONCENTRATIONS ON MIRIDS AND  
 ANTHOCORIDS IN ORCHARDS.  
 AU HESJEDAL K  
 SO FORSK FORS LANDBRUKET, (1986 (RECD 1987)) 37 (4), 213-218.  
 CODEN: FFLAAB. ISSN: 0429-1913.
- L17 ANSWER 19 OF 24 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

TI MONITORING OF THE GREEN **CAPSID** BUG LYGOCORIS-PABULINUS HEMIPTERA  
 MIRIDAE IN APPLE ORCHARDS.  
 AU BUS V G M; MOLS P J M; BLOMMERS L H M  
 SO 37TH INTERNATIONAL SYMPOSIUM ON CROP PROTECTION, GHENT, BELGIUM. MEDED FAC  
 LANDBOUWWET RIJKSUNIV GENT. (1985 (RECD 1986)) 50 (2 PART B), 505-510.  
 CODEN: MFLRA3. ISSN: 0368-9697.

L17 ANSWER 20 OF 24 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI PLANT BUGS AND EAR LEUCOCHROISM OF GRASSES.  
 AU ROTREKL J; KLUMPAR J; CAGAS B; BUMERL J  
 SO SB UVTIZ (USTAV VEDECKOTECH INF ZEMED) OCHR ROSTL, (1985 (RECD 1986)) 21  
 (4), 267-274.  
 CODEN: SUSRD8.

L17 ANSWER 21 OF 24 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI BHC RESISTANCE SURVEY..  
 AU MARCHART H; COLLINGWOOD C A  
 SO Annu. Rep. - Cocoa Res. Inst. (Tafo, Ghana), (1969) 1967-1968, 78-80.  
 CODEN: CRGAB4. ISSN: 0374-714X.

L17 ANSWER 22 OF 24 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI SPRAYING TECHNIQUES.  
 AU MARCHART H  
 SO Annu. Rep. - Cocoa Res. Inst. (Tafo, Ghana), (1969) 1967-1968, 73-74.  
 CODEN: CRGAB4. ISSN: 0374-714X.

L17 ANSWER 23 OF 24 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI CAGE SPRAYING TESTS.  
 AU MARCHART H; PICKETT A D  
 SO Annu. Rep. - Cocoa Res. Inst. (Tafo, Ghana), (1969) 1967-1968, 72.  
 CODEN: CRGAB4. ISSN: 0374-714X.

L17 ANSWER 24 OF 24 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI ANT **CAPSID** ECOLOGY.  
 AU LESTON D  
 SO Annu. Rep. - Cocoa Res. Inst. (Tafo, Ghana), (1969) 1967-1968, 65-68.  
 CODEN: CRGAB4. ISSN: 0374-714X.